LineUp With Math™ Alignment
Mathematics Grade Expectations

Standard 7.6: Arithmetic, Number, and Operation Concepts

Grade Expectations	***LineUp With Math™* Activities**
MHS: 4 Accurately solves problems involving proportional reasoning or percents involving the effect of changing the base, rate, or percentage (the three cases of percent), or variations on order of finding percentages (10% off followed by 5% off), and compound interest.	--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control. --Use percent relationships to resolve distance, rate, time conflicts in air traffic control.
MHS: 7 Estimates and evaluates the reasonableness of numerical computations and solutions, including those carried out with technology.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Standard 7.7: Geometry and Measurement Concepts

Grade Expectations	***LineUp With Math™* Activities**
MHS: 15 Measures and uses units of measures appropriately and consistently when solving problems across the content strands. Makes conversions within or across systems and makes decisions concerning an appropriate degree of accuracy in problem situations involving measurement. Uses measurement conversion strategies, such as unit/dimensional analysis or uses quotient measures, such as speed and density, that give per unit amounts, or uses product measures, such as person hours to solve problems. (See Appendix B for benchmark units and equivalences for each grade.)	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.

Standard 2.5: Mathematical dimensions, Standard 7.10: Mathematical Problem Solving and Reasoning - Applications	
Grade Expectations **MHS: 30 Demonstrate understanding of mathematical problem solving[2] and communication by:[4]** • **Approach and Reasoning**—The strategies and skills used to solve the problem, and the reasoning that supports the approach; • **Execution**—The answer and the mathematical work that supports it; • **Observations and Extensions**—Demonstration of observation, connections, application, extensions, and generalizations; • **Mathematical Communication**—The use of mathematical vocabulary and representation to communicate the solution; and • **Presentation**—Effective communication of how the problem was solved, and of the reasoning used.	***LineUp With Math™* Activities** --Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios. --Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts. --Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.